

WHAT IS CLAIMED IS:

1. A solid-state imaging apparatus:

a solid-state imaging element having a plurality of pixels for subdividing incident light from a photographic subject into a plurality of color signals so as to image the photographic subject, the solid-state imaging element including two sorts of pixels whose spectral sensitivities are different from each other as said pixel for detecting at least one color among said plurality of color signals; and

signal processing means for performing a white balance correcting operation based upon a gain amount corresponding to a sort of a light source with respect to photographed image data outputted from the solid-state image element, said signal processing means including:

mixing ratio predicting means operated in such a manner that when there are plural sorts of light sources as to the incident light, a mixing ratio of illumination light emitted from said plural sorts of light sources is predicted every pixel from photographed image data acquired by said pixels having two sorts of said spectral sensitivities; and

gain amount calculating means for calculating a gain amount used to perform the white balance correcting operation every pixel in response to said mixing ratio.

2. A solid-stage imaging apparatus as claimed in claim 1, wherein said signal processing means further includes:

means for multiplying a color difference signal obtained

from said photographed image data by a color difference matrix  
so as to correct a color tone; and

color difference matrix correcting means for correcting  
a coefficient of said color difference matrix in response to  
5 said mixing ratio.

3. A solid-state imaging apparatus as claimed in claim  
1, wherein said signal processing means further includes light  
source sort judging means for judging a sort of light source  
10 based upon said photographed image data.

4. A solid-state imaging apparatus as claimed in claim  
2, wherein said signal processing means further includes light  
source sort judging means for judging a sort of light source  
15 based upon said photographed image data.

5. A digital camera comprising:  
a solid-state imaging element having a plurality of pixels  
for subdividing incident light from a photographic subject into  
20 a plurality of color signals so as to image the photographic  
subject, the solid-state imaging element including two sorts  
of pixels whose spectral sensitivities are different from each  
other as said pixel for detecting at least one color among said  
plurality of color signals; and  
25 signal processing means for performing a white balance  
correcting operation based upon a gain amount corresponding to  
a sort of a light source with respect to photographed image data

outputted from the solid-state image element, said signal processing means including:

5       mixing ratio predicting means operated in such a manner that when there are plural sorts of light sources as to the incident light, a mixing ratio of illumination light emitted from said plural sorts of light sources is predicted every pixel from photographed image data acquired by said pixels having two sorts of said spectral sensitivities; and

10       gain amount calculating means for calculating a gain amount used to perform the white balance correcting operation every pixel in response to said mixing ratio.

6.     A digital camera as claimed in claim 5, wherein said signal processing means further includes:

15       means for multiplying a color difference signal obtained from said photographed image data by a color difference matrix so as to correct a color tone; and

20       color difference matrix correcting means for correcting a coefficient of said color difference matrix in response to said mixing ratio.

7.     A digital camera as claimed in claim 5, wherein said signal processing means further includes light source sort judging means for judging a sort of light source based upon said  
25   photographed image data.